



# STIC Search Report

## EIC 1700

STIC Database Tracking Number: 96175

**TO: ROBERT SELLERS**

**Location: CP3 5B12**

**Art Unit : 1712**

**June 9, 2003**

**Case Serial Number: 10/044940**

**From: Kathleen Fuller**

**Location: EIC 1700**

**CP3/4 3D62**

**Phone: 308-4290**

**Kathleen.Fuller@uspto.gov**

### Search Notes

I DID A STRUCTURE SEACH ON THE DESIRED COMPOUNDS AND DID NOT FIND A MONOMER OR A POLYMER INDEXED BY ITS MONOMERS WHICH MATCHED THE COMPOUNDS IN THE CLAIMS.

=> FILE REG

FILE 'REGISTRY' ENTERED AT 15:51:31 ON 09 JUN 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 JUN 2003 HIGHEST RN 526915-11-7

DICTIONARY FILE UPDATES: 6 JUN 2003 HIGHEST RN 526915-11-7

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 15:51:37 ON 09 JUN 2003

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FILE COVERS 1907 - 9 Jun 2003 VOL 138 ISS 24

FILE LAST UPDATED: 8 Jun 2003 (20030608/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE L20

L6 STR /

G1~P~O

1 2 3

VAR G1=X/O

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

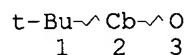
KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 3

## STEREO ATTRIBUTES: NONE

L7 STR2



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

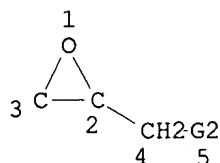
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 3

## STEREO ATTRIBUTES: NONE

L9 SCR 2043

L11 132 SEA FILE=REGISTRY SSS FUL L6 AND L7 AND L9

L12 STR 3



VAR G2=O/X

## NODE ATTRIBUTES:

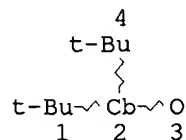
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 5

## STEREO ATTRIBUTES: NONE

L13 STR 4



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 4

## STEREO ATTRIBUTES: NONE

*132 polymers from structure one and two which covers the preferred structures*

*Subset search with structure 3 or 4*

*45 polymers*

L16 45 SEA FILE=REGISTRY SUB=L11 SSS FUL (L12 OR L13)  
 L18 21 SEA FILE=REGISTRY ABB=ON L16 NOT PIPERID?  
 L19 15 SEA FILE=REGISTRY ABB=ON L18 NOT 1-10/N  
 L20 12 SEA FILE=HCAPLUS ABB=ON L19

*removed nitrogen  
 + piperidine  
 rings.  
 Leaving  
 15 structures on  
 12 C.A. reference*

=> D L20 ALL 1-12 HITSTR

L20 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1993:588647 HCAPLUS  
 DN 119:188647  
 TI Dental composites containing polyalkenoic acid and glass filler  
 IN Huang, Chin Teh; Jefferies, Steven R.; Hammesfahr, Paul D.; Lu, Kewang  
 PA Dentsply International, Inc., USA  
 SO Eur. Pat. Appl., 14 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC ICM A61K006-083  
 ICS A61K006-00  
 CC 63-7 (Pharmaceuticals)  
 FAN.CNT 9

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 554890	A1	19930811	EP 1993-101823	19930205
	R: CH, DE, FR, GB, IT, LI				
	US 5367002	A	19941122	US 1992-832202	19920206
	AU 9332010	A1	19930812	AU 1993-32010	19930126
	AU 671091	B2	19960815		
	CA 2088633	AA	19930807	CA 1993-2088633	19930202
	CA 2088633	C	19970729		
	JP 05255033	A2	19931005	JP 1993-18866	19930205
PRAI	US 1992-832202	A	19920206		

OS MARPAT 119:188647

AB The title composites which are useful as cement, liner, base restorative, pit and fissure sealants, and/or core build-up material have improved adhesion to dentin. A polymerizable liq. was prepd. by mixing a 50% aq. poly(acrylic acid) 14.2, hydroxyethyl methacrylate 28.5, BHT 0.1, triethyleneglycol dimethacrylate 28.5, partially neutralized dipentaerythritol pentacrylate phosphoric acid ester (prepn. is given) 28.5, and camphorquinone 0.2 parts by wt. A powder for use with above liq. was formed by mixing Sr aluminosilicate glass 79.19, Et 4-dimethylaminobenzoate 0.8, Ba aluminoborosilicate glass 20, and inorg. pigments 0.01 parts by wt. A dental liner was prepd. by mixing 1.8 parts of the above powder with 1 part of above liq. and mixing for 30 s. The compn. so prepd. had a compressive strength of 24,725 psi, diametral tensile strength of 4,478 psi, and bond strength to human dentin of 1302 psi.

ST dental composite polyalkenoic acid glass

IT Glass, oxide

RL: BIOL (Biological study)

(barium aluminoborosilicate, dental composite contg. polyalkenoic acid and)

IT Dental materials and appliances

(bases, glass filler and polyalkenoic acid in)

IT Dental materials and appliances

(cements, glass filler and polyalkenoic acid in)

IT Dental materials and appliances

(composites, glass filler and polyalkenoic acid in)

IT Dental materials and appliances  
(cores, glass filler and polyalkenoic acid in)

IT Dental materials and appliances  
(liners, glass filler and polyalkenoic acid in)

IT Glass, oxide  
RL: BIOL (Biological study)  
(strontium aluminosilicate, dental composite contg. polyalkenoic acid and)

IT **150526-02-6**  
RL: BIOL (Biological study)  
(dental composite contg. glass filler and)

IT 10287-53-3, Ethyl 4-dimethylaminobenzoate  
RL: BIOL (Biological study)  
(dental composite contg. glass filler and polyalkenoic acid and)

IT 554-68-7, Triethylamine hydrochloride  
RL: FORM (Formation, nonpreparative)  
(formation of, in prepn. of pentaerythritol pentacrylate phosphoric acid ester)

IT 87699-25-0P  
RL: PREP (Preparation)  
(prepn. of, dental composite contg. glass filler and)

IT 121-44-8, Triethylamine, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with pentaerythritol pentacrylate and phosphorous oxychloride)

IT 10025-87-3, Phosphoryl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with pentaerythritol pentacrylate and triethylamine)

IT 60506-81-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with phosphorous oxychloride and triethylamine)

IT **150526-02-6**  
RL: BIOL (Biological study)  
(dental composite contg. glass filler and)

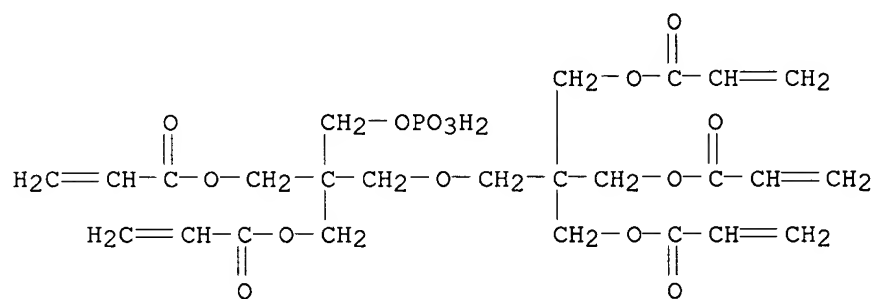
RN 150526-02-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediylbis(oxy-2,1-ethanediyl) ester, polymer with 2,6-bis(1,1-dimethylethyl)-4-methylphenol, 2-[[[2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]-3-(phosphonooxy)propoxy]methyl]-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 87699-25-0

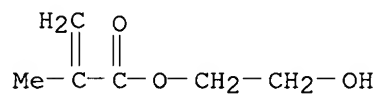
CMF C25 H33 O15 P



CM 2

CRN 868-77-9

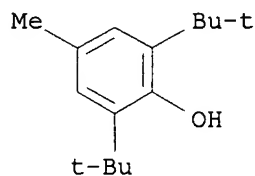
CMF C6 H10 O3



CM 3

CRN 128-37-0

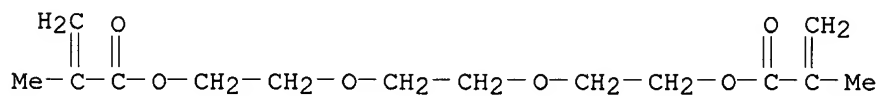
CMF C15 H24 O



CM 4

CRN 109-16-0

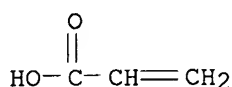
CMF C14 H22 O6



CM 5

CRN 79-10-7

CMF C3 H4 O2



L20 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1986:130841 HCAPLUS

DN 104:130841

TI Stabilized compositions of rigid PVC

IN Reid, William J.; Zappia, Jean M.; Capocci, Gerald A.; Spivack, John D.

PA Ciba-Geigy A.-G., Switz.

SO Eur. Pat. Appl., 34 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM C08K013-02

ICS C08L027-06

ICI C08K013-02, C08K003-22, C08K005-37, C08K005-13, C08K005-38, C08K005-53, C08K005-20, C08K005-52

CC 37-6 (Plastics Manufacture and Processing)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 152097	A2	19850821	EP 1985-101491	19850212
	EP 152097	A3	19860409		
	EP 152097	B1	19890118		
	R: BE, DE, FR, GB, IT, NL				
	US 4555541	A	19851126	US 1984-579232	19840213
	CA 1257440	A1	19890711	CA 1985-473998	19850211
	JP 60210654	A2	19851023	JP 1985-26120	19850213
	JP 06004742	B4	19940119		
PRAI	US 1984-579232		19840213		

AB Heat-, light- and impact-resistant rigid PVC contains 2-8% TiO<sub>2</sub>, Sn mercaptide heat stabilizers and benzoate deriv. light stabilizers. Thus, a plate contg. Geon 103 EP-76 (PVC) 100, Acryloid K 20 processing aid 1.5, Acryloid K 330 impact-improver 5.0, Ca stearate 1.0, paraffin wax 1.0, polyethylene wax 1.0, Thermolite T 137 (Sn mercaptide) 1.6, rutile TiO<sub>2</sub> 5, bis(3,5-di-tert-butyl-4-dodecyloxycarbonylphenyl)phosphonate (I) light stabilizer 5 exhibited yellowness index 16 after 3235 h in a Xenon Weatherometer (70-75% humidity, 55-60.degree.), vs. 21 without the I.

ST light stabilizer impact resistant PVC; titania contg PVC light stabilizer; heat stabilizer impact resistant PVC; hydroxybenzoate deriv light stabilizer; tin mercaptide heat stabilizer; tertiary butyldodecyloxycarbonylphenyl phosphonate light stabilizer

IT Light stabilizers

(hydroxybenzoic acid derivs., for impact-resistant PVC contg. tin mercaptide heat stabilizers and low concns. of titanium dioxide)

IT Heat stabilizers

(tin mercaptides, for impact-resistant PVC contg. hydroxybenzoic acid deriv. light stabilizers and low concns. of titanium dioxide)

IT Thiols, compounds

RL: USES (Uses)

(tin salts, heat stabilizers, for impact-resistant PVC contg. hydroxybenzoic acid deriv. light stabilizers and low concns. of titanium dioxide)

IT 7440-31-5D, mercaptides 101063-30-3

RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, for impact-resistant PVC contg. hydroxybenzoic acid deriv. light stabilizers and titanium dioxide)

IT 13463-67-7, uses and miscellaneous  
 RL: USES (Uses)  
 (impact-resistant PVC contg., stabilizers for, tin mercaptides and hydroxybenzoic acid derivs. as)

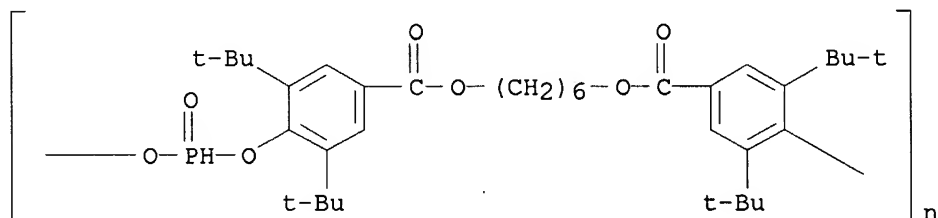
IT 9002-86-2  
 RL: USES (Uses)  
 (impact-resistant compns., contg. low concns. of titanium dioxide, tin mercaptides and hydroxybenzoic acid deriv. stabilizers for)

IT 2511-22-0 4221-80-1 15188-12-2 36443-69-3 53606-82-9 53606-83-0  
 53606-96-5 67845-93-6 92995-80-7 100204-30-6 101151-12-6  
 101237-95-0 101237-96-1 101237-97-2 101237-98-3  
 RL: USES (Uses)  
 (light stabilizers, for impact-resistant PVC contg. tin mercaptide heat stabilizers and titanium dioxide)

IT 101151-12-6  
 RL: USES (Uses)  
 (light stabilizers, for impact-resistant PVC contg. tin mercaptide heat stabilizers and titanium dioxide)

RN 101151-12-6 HCAPLUS

CN Poly[oxyphosphinylideneoxy[2,6-bis(1,1-dimethylethyl)-1,4-phenylene]carbonyloxy-1,6-hexanediylloxycarbonyl[3,5-bis(1,1-dimethylethyl)-1,4-phenylene]] (9CI) (CA INDEX NAME)



L20 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1983:216948 HCAPLUS

DN 98:216948

TI Age-resistant polymers containing chemically bound antioxidant functional groups

IN Farrar, Ralph C.

PA Phillips Petroleum Co. , USA

SO U.S., 9 pp.

CODEN: USXXAM

DT Patent

LA English

IC C08F008-00; C08F008-32

NCL 525132000

CC 39-4 (Synthetic Elastomers and Natural Rubber)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4377666	A	19830322	US 1981-293737	19810817
PRAI	US 1981-293737		19810817		

AB Diene rubbers having chem. bound antioxidant functional groups were prepd.



by the treating polymer-alkali metal with antioxidants contg. functional groups reactable with the polymer-alkali metal. Thus, using BuLi as catalyst, a mixt. of butadiene and styrene were polymd. in cyclohexane at 70.degree. for 60 min, then 1.5 phr Irganox 1076 (I) was added and polymn. continued for 15 min to give an elastomeric copolymer [85947-84-8] having inherent viscosity 1.23, Mooney viscosity (ML-4) 87, and heterogeneity index 118, compared with 1.02-1.04, 89-92, and 1.06, resp., for a similar rubber not reacted with I.

ST diene rubber antioxidant monomer

IT Rubber, synthetic

(butadiene-octadecyl(di-tert-butylhydroxyphenyl)propionate-styrene, prepn. of, contg. chem. bound antioxidant functional groups)

IT Rubber, synthetic

(butadiene-reactive phenolic antioxidants, prepn. of, contg. chem. bound antioxidant functional groups)

IT 85947-84-8P 85947-85-9P 85947-86-0P 85947-87-1P 85947-88-2P

**85947-89-3P**

RL: IMF (Industrial manufacture); PREP (Preparation)

(rubber, prepn. of, contg. chem. bound antioxidant functional groups)

IT **85947-89-3P**

RL: IMF (Industrial manufacture); PREP (Preparation)

(rubber, prepn. of, contg. chem. bound antioxidant functional groups)

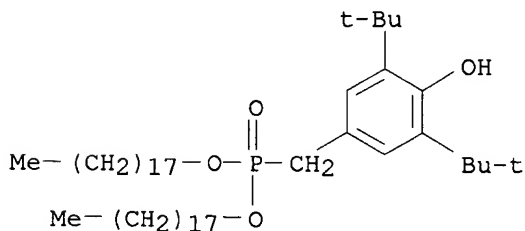
RN 85947-89-3 HCAPLUS

CN Phosphonic acid, [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]-, dioctadecyl ester, polymer with 1,3-butadiene (9CI) (CA INDEX NAME)

CM 1

CRN 3135-18-0

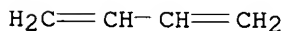
CMF C51 H97 O4 P



CM 2

CRN 106-99-0

CMF C4 H6



L20 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1982:564034 HCAPLUS

DN 97:164034

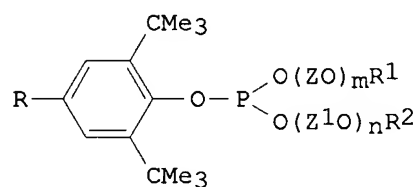
TI Phosphite heat and light stabilizers for halogen-containing resins

PA Adeka Argus Chemical Co., Ltd., Japan

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC C08L027-04; C08K005-52  
 CC 37-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 57074345	A2	19820510	JP 1980-150327	19801027
	JP 63020263	B4	19880427		
PRAI	JP 1980-150327		19801027		
GI					



I

AB Phosphite compds. I (R = C1-4 alkyl; R1, R2 = alkyl, aryl, alkylaryl, arylalkyl; Z, Z1 = divalent hydrocarbon radical; m .gtoreq.1; n .gtoreq.0) are added to resins contg. halogen(s) to improve their light and heat stability. Thus, a sheet was prepd. from a compn. of PVC (Geon 103 EP-8) [9002-86-2] 100, MBS [25053-09-2] 10, epoxidized soybean oil 1.0, stearic acid 0.3, Zn toluate 0.4, Ba nonylphenoxide 0.7, and I (R = Me, R1 = R2 = Bu, Z = Z1 = CH2CH2, m = n = 2, (II) [83326-93-6] 0.3 part. Testing of the sheet showed very good initial coloring and 120 min heat-stability at 190.degree., compared with fair and 90 min, resp., when II was replaced by bis(nonylphenyl) butoxyethoxyethyl phosphite.

ST halogen contg resin heat stabilizer; light stabilizer PVC; phosphite heat light stabilizer

IT Heat stabilizers  
 Light stabilizers  
 (hindered arom. phosphites, for PVC)

IT 25053-09-2  
 RL: USES (Uses)  
 (PVC blends, heat and light stabilizers for, hindered arom. phosphites as)

IT 9002-86-2  
 RL: USES (Uses)  
 (heat and light stabilizers for, hindered arom. phosphites as)

IT 83326-85-6 83326-86-7 83326-87-8 83326-88-9 83326-89-0  
 83326-90-3 83326-91-4 83326-92-5D, alkyl ethers 83326-93-6  
 83327-61-1 83327-62-2 83327-63-3 83327-64-4 **83382-59-6**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat and light stabilizers, for PVC)

IT **83382-59-6**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat and light stabilizers, for PVC)

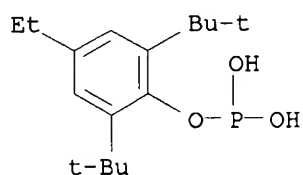
RN 83382-59-6 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, 2,6-bis(1,1-dimethylethyl)-4-ethylphenyl phosphite (2:1), dioctyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 176429-18-8

CMF C16 H27 O3 P



CM 2

CRN 111-87-5

CMF C8 H18 O

HO-(CH<sub>2</sub>)<sub>7</sub>-Me

CM 3

CRN 9003-11-6

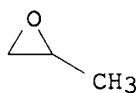
CMF (C3 H6 O . C2 H4 O) x

CCI PMS

CM 4

CRN 75-56-9

CMF C3 H6 O



CM 5

CRN 75-21-8

CMF C2 H4 O

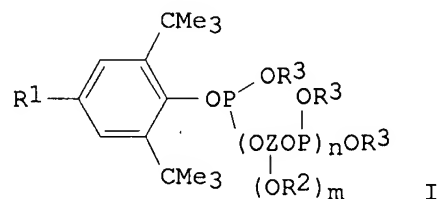


AN 1982:20841 HCAPLUS  
 DN 96:20841  
 TI 2,6-Di-tert-butyl phenyl phosphites and synthetic resin compositions  
 containing these phosphites  
 IN Minagawa, Motonobu; Nakahara, Yutaka  
 PA Adeka Argus Chemical Co., Ltd., Japan  
 SO Eur. Pat. Appl., 66 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA English  
 IC C08K005-52; C07F009-145  
 CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 33395	A2	19810812	EP 1980-108237	19801229
	EP 33395	A3	19810826		
	EP 33395	B1	19860528		
	R: AT, BE, CH, DE, FR, GB, IT, NL, SE				
	JP 56092934	A2	19810728	JP 1979-170097	19791226
	JP 62016224	B4	19870411		
	US 4371646	A	19830201	US 1980-220405	19801229
	AT 20076	E	19860615	AT 1980-108237	19801229
PRAI	JP 1979-170097		19791226		
	EP 1980-108237		19801229		

GI



AB Heat and light stabilizers for polymers [I; R1 = H, Me, Et, (CH2)xCO2R4, R4 = alkyl, cycloalkyl, aralkyl, aryl, x = 0-5; R3 = H, alkyl, cycloalkyl, aryl, polyhydric alc., polyphenol residues, R2 = H, P(OR3)2; Z = bivalent or trivalent hydrocarbon group, polyphenol residue; m = 0, 1; n = 1-5] are prep'd. and used. Thus, PVC [9002-86-2] 100, DOP 48, epoxidized soybean oil 2.0, Ca stearate 1.0, Zn stearate 0.2, and 2,6-di-tert-butyl-4-methylphenyl tris(tridecyl) 2,5-dibutylhydroquinone diphosphite [79570-33-5] 0.5 part were compounded and heated in air at 190.degree. to give time to failure 90 min, compared with 45 min for octyl di-Ph phosphite.

ST phosphite heat stabilizer PVC; light stabilizer phosphite PVC

IT Heat stabilizers  
 Light stabilizers  
 (di-tert-butylphenyl phosphites, for polymers)

IT Polycarbonates  
 RL: USES (Uses)  
 (stabilizers for, di-tert-butylphenyl phosphites as)

IT Linseed oil  
 Soybean oil

RL: USES (Uses)

(epoxidized, stabilizers, contg. di-tert-butylphenyl phosphites, for polymers)

IT	79570-32-4	79570-33-5	79570-34-6	79570-35-7	79570-36-8
	79570-37-9	79570-38-0	79570-39-1	79570-40-4	79587-00-1
	79587-02-3	79587-03-4	79596-06-8	79596-08-0	79596-10-4
	79596-12-6	79596-16-0	79596-17-1	79596-18-2	79596-19-3
	79596-20-6	79596-21-7	79596-26-2	79596-45-5	79596-47-7
	79596-48-8	79596-50-2	79596-52-4	79596-53-5	79596-54-6
	79596-55-7	79596-56-8	79596-57-9	79596-58-0	79596-60-4
	79596-61-5	79596-63-7	79596-64-8	79596-65-9	79596-66-0
	79596-68-2	79596-69-3	79596-70-6	79596-72-8	79596-73-9
	79596-75-1	79596-77-3	79596-78-4	79596-80-8	79596-81-9
	79596-83-1	79596-84-2	79596-85-3	79596-86-4	79596-88-6
	<b>79596-95-5</b>	79621-32-2	79621-34-4	79621-35-5	79621-36-6
	<b>79621-38-8</b>	79621-52-6	79646-09-6		

RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(heat and light stabilizers, for polymers)

IT 26248-42-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with bis(dichlorophosphinoxy)benzene)

IT 25339-17-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with bisphenol A, di-tert-butylmethylphenol, and phosphorus trichloride)

IT 80-05-7, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with di-tert-butylmethylphenol, isodecanol and phosphorus trichloride)

IT 128-37-0, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with phosphorus trichloride, bisphenol A and isodecanol)

IT 41105-12-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with tridecanol)

IT 9002-86-2 9002-88-4 9003-07-0

RL: USES (Uses)

(stabilizers for, di-tert-butylphenyl phosphites as)

IT 9003-53-6 9003-54-7 9003-56-9 24938-67-8 25134-01-4

RL: PRP (Properties)

(stabilizers for, di-tert-butylphenyl phosphites as)

IT 106-84-3 106-87-6 1675-54-3 2386-87-0 2451-62-9 7144-65-2

9003-17-2D, epoxidized

RL: USES (Uses)

(stabilizers, contg. di-tert-butylphenyl phosphites, for polymers)

IT **79596-95-5 79621-38-8**

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(heat and light stabilizers, for polymers)

RN 79596-95-5 HCAPLUS

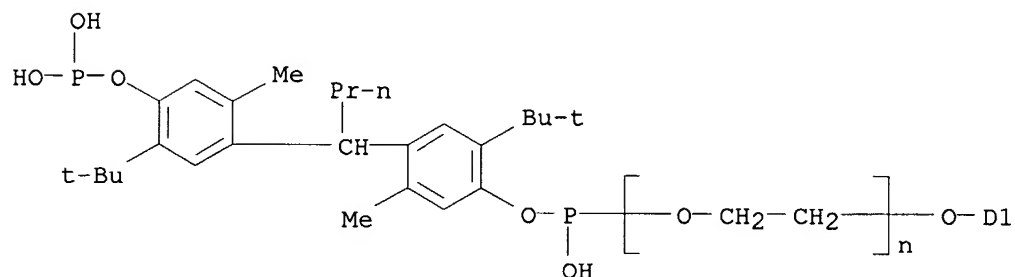
CN Poly(oxy-1,2-ethanediyl), .alpha.-[[4-[1-[4-[(dihydroxyphosphino)oxy]-5-(1,1-dimethylethyl)-2-methylphenyl]butyl]-2-(1,1-dimethylethyl)-5-methylphenoxy]hydroxyphosphino]-.omega.-(nonylphenoxy)-, 2,6-bis(1,1-dimethylethyl)phenyl ditridecyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 79596-94-4

CMF (C2 H4 O)n C41 H62 O6 P2

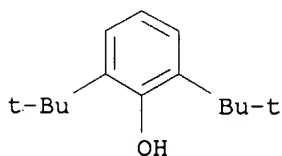
CCI IDS, PMS

D1- (CH<sub>2</sub>)<sub>8</sub>-Me

CM 2

CRN 128-39-2

CMF C14 H22 O



CM 3

CRN 112-70-9

CMF C13 H28 O

Me- (CH<sub>2</sub>)<sub>12</sub>-OH

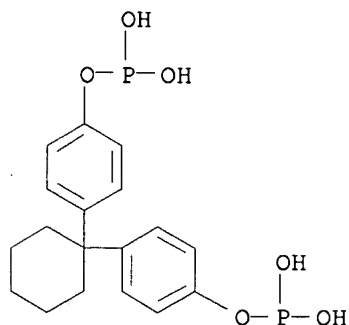
RN 79621-38-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-dodecyl-.omega.-hydroxy-, ester with phosphorous acid cyclohexylidenedi-4,1-phenylene bis[2,6-bis(1,1-dimethylethyl)-4-methylphenyl] monoethyl ester (9CI) (CA INDEX NAME)

CM 1

CRN 79596-71-7

CMF C18 H22 O6 P2

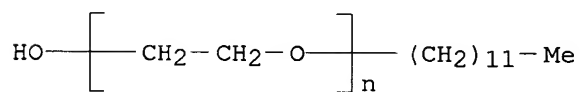


CM 2

CRN 9002-92-0

CMF (C2 H4 O)n C12 H26 O

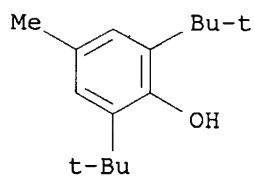
CCI PMS



CM 3

CRN 128-37-0

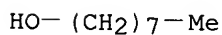
CMF C15 H24 O



CM 4

CRN 111-87-5

CMF C8 H18 O



L20 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1981:444192 HCAPLUS

DN 95:44192

TI Fire-retardant, thermosetting, resinous reaction products of phosphoric

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

acid and methylol- or alkoxymethyl-substituted epoxides  
 IN Martin, Patrick H.; Schrader, Paul G.; Stringham, Robert R.  
 PA Dow Chemical Co., USA  
 SO U.S., 17 pp. Cont.-in-part of U.S. Ser. No. 753,766, abandoned.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C08G059-14; C08G008-28  
 NCL 521059000  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4256844	A	19810317	US 1979-46290	19790607
PRAI	US 1976-753766		19761223		
AB	Heat-curable, flame-retardant resins useful for structural foams and coatings comprise resins formed by reaction of H3PO4 with mono- or polyfunctional glycidyl ethers of phenols contg. methylol or alkoxymethyl groups. Thus, wood shingles coated with a 1/8 in. film of phosphoric acid-2,2',6,6'-tetrakis(methoxymethyl)bisphenol A diglycidyl ether copolymer [77756-71-9] were self-extinguishing in 5 s in a vertical flame test, and were in good condition after the test with 25-50% charring.				
ST	epoxide phosphate flame retardant; wood fireproofing coating; methoxymethylphenyl glycidyl ether phosphate resin				
IT	Wood (fireproofing of, with phosphoric acid reaction products with glycidyl ethers of methylol- or alkoxymethyl-substituted phenols)				
IT	Fireproofing agents (phosphoric acid reaction products with glycidyl ethers of methylol- or alkoxymethyl-substituted phenols)				
IT	Coating materials (fire-resistant, phosphoric acid reaction products with glycidyl ethers of methylol- or alkoxymethyl-substituted phenols as)				
IT	25038-59-9, uses and miscellaneous RL: USES (Uses) (films, fireproofing coatings for)				
IT	77756-69-5 77756-71-9 77756-77-5 RL: USES (Uses) (flame retardants, for polymer films and foams)				
IT	77756-45-7 77756-73-1 77756-76-4 77786-24-4 RL: USES (Uses) (flame retardants, for polymer foams)				
IT	77733-38-1P RL: PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process) (prepn. and polymn. of)				
IT	50-00-0, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with butylphenol)				
IT	106-89-8, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with dimethylolbutylphenol)				
IT	98-54-4 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with formaldehyde)				
IT	2203-14-7 RL: RCT (Reactant); RACT (Reactant or reagent) (reaction of, with phosphoric acid)				



IT 77756-45-7 77756-73-1 77786-24-4

RL: USES (Uses)

(flame retardants, for polymer foams)

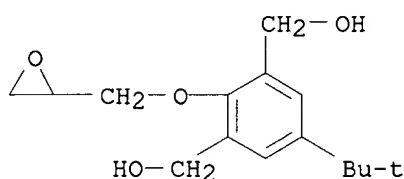
RN 77756-45-7 HCAPLUS

CN Phosphoric acid, polymer with 5-(1,1-dimethylethyl)-2-(oxiranylmethoxy)-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 77733-38-1

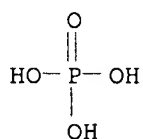
CMF C15 H22 O4



CM 2

CRN 7664-38-2

CMF H3 O4 P



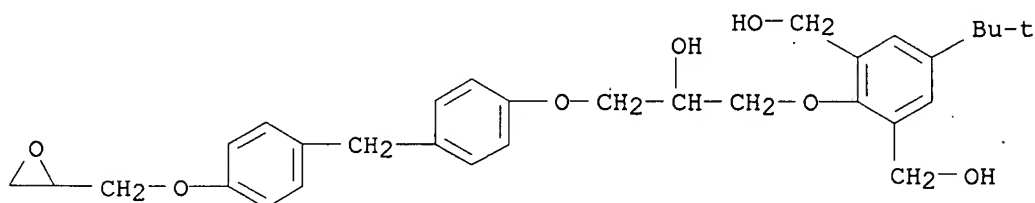
RN 77756-73-1 HCAPLUS

CN Phosphoric acid, polymer with 5-(1,1-dimethylethyl)-2-[2-hydroxy-3-[4-[[4-(oxiranylmethoxy)phenyl]methyl]phenoxy]propoxy]-1,3-benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

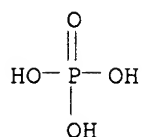
CRN 77756-72-0

CMF C31 H38 O7



CM 2

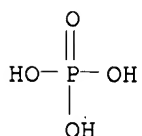
CRN 7664-38-2  
CMF H3 O4 P



RN 77786-24-4 HCAPLUS  
CN Phosphoric acid, polymer with (chloromethyl)oxirane, 5-(1,1-dimethylethyl)-2-hydroxy-1,3-benzenedimethanol and 4,4'-(1-methylethyli-dene)bis[phenol] (9CI) (CA INDEX NAME)

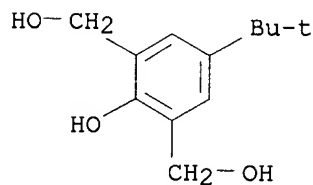
CM 1

CRN 7664-38-2  
CMF H3 O4 P



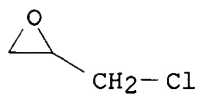
CM 2

CRN 2203-14-7  
CMF C12 H18 O3



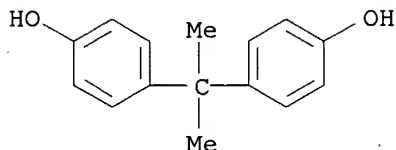
CM 3

CRN 106-89-8  
CMF C3 H5 Cl O



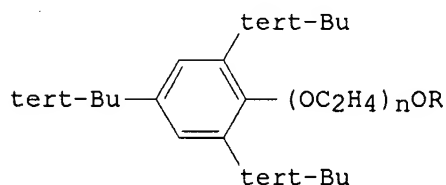
CM 4

CRN 80-05-7  
CMF C15 H16 O2



L20 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2003 ACS  
AN 1981:183358 HCAPLUS  
DN 94:183358  
TI Incorporating photographic additives in hydrophilic colloids  
IN Tomka, Ivan  
PA Ciba-Geigy A.-G., Switz.  
SO Eur. Pat. Appl., 49 pp.  
CODEN: EPXXDW  
DT Patent  
LA German  
IC G03C001-00; G03C007-00; B01F017-00  
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic Processes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 19800	A1	19801210	EP 1980-102665	19800513
	EP 19800	B1	19820811		
	R: BE, CH, DE, FR, GB, IT				
	US 4284709	A	19810818	US 1980-147785	19800508
	JP 55153933	A2	19801201	JP 1980-63472	19800515
PRAI	CH 1979-4503		19790515		
GI					



I

AB As a means of incorporating water-insol. photog. additives, such as dyes, color couplers, or bleach catalysts, as dispersion with a particle size <1 .mu. in an aq. soln. of a natural or synthetic hydrophilic colloid with a min. of mech. energy, they are mixed by fusion with a combination of 2 dispersants in a ratio of 1:0.1-4. Addn. of <10% of water-immiscible solvents is required in some cases. The combination is distributed in the aq. colloid soln. at a ratio of 1:5-100. An oil-in-water emulsion is formed by stirring or low-frequency vibrators, without the use of colloid mills or supersonics, with a Poisson function particle size distribution, independently of the energy applied. Any volatile solvent is removed by evapn. prior to coating. The dispersant mixt. consists of a nonionic variously substituted alkylene oxide adduct of an alkylphenol or

diphenolmethane with an ester of these adducts, such as I (n = 30, R = H) (II) or I (n = 7, R = SO<sub>3</sub>Na) (III), in a ratio of 1:0.05-0.2. Thus, a magenta coupler 320 was fused at 50.degree. with dispersant II 170 and III 25 parts, and stirred with a soln. of gelatin 250 in water 5235 parts at 40.degree.. The av. particle size was detd. as 0.12. Another dispersion of the coupler made with tricresyl phosphate and EtOAc as solvents and a homogenizer had a particle size of 0.20 .mu.. After mixing with a AgBr emulsion, coating on a glass plate, exposure and processing, magenta images with a Dmax of 2.66 and of 2.42, resp., were obtained.

ST photog additive dispersion hydrophilic colloid

IT Photographic emulsions

(additive incorporation in, water-insol.)

IT Photography, color

(additives for, incorporation of, in hydrophilic colloids)

IT Photographic couplers

(incorporation of water-insol., in hydrophilic colloids)

IT 26636-37-3 28806-39-5 31631-25-1 32054-86-7 63663-09-2  
67906-07-4 77291-31-7 77291-32-8 77291-33-9 77291-34-0  
77291-35-1 77291-36-2 77291-37-3 77291-38-4 **77291-39-5**  
77306-56-0 77306-57-1 77306-58-2

RL: USES (Uses)

(dispersing agent mixt. contg., for water-insol. photog. additive incorporation in hydrophilic colloid)

IT 903-19-5 3846-71-7 31188-91-7 31994-60-2 67178-60-3 67803-70-7  
70609-70-0 77456-74-7 77469-52-4 77492-26-3

RL: USES (Uses)

(incorporation of photog. additive of, in hydrophilic colloid, process for)

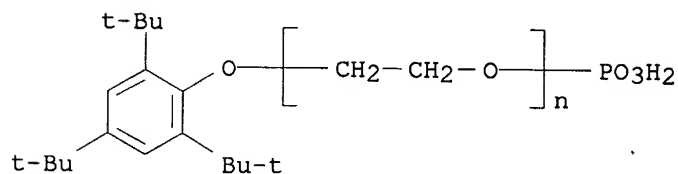
IT **77291-39-5**

RL: USES (Uses)

(dispersing agent mixt. contg., for water-insol. photog. additive incorporation in hydrophilic colloid)

RN 77291-39-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-phosphono-.omega.-[2,4,6-tris(1,1-dimethylethyl)phenoxy]-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L20 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2003 ACS.

AN 1980:216251 HCAPLUS

DN 92:216251

TI Halogen-containing resin compositions

IN Minagawa, Motonobu; Nakahara, Yutaka; Yoshikawa, Kazumi

PA Adeka Argus Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent  
 LA Japanese  
 IC C08L027-00; C08K005-52; C08L023-28  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54163938	A2	19791227	JP 1978-72788	19780616
PRAI	JP 1978-72788		19780616		

AB Metal salts of org. acids, mono-H phosphites of hindered phenols, and phosphites of hindered phenols were added to PVC [9002-86-2] optionally contg. ABS polymer [9003-56-9] to improve thermal stability. Thus, a mixt. of PVC 100, dioctyl phthalate 48, epoxidized soybean oil 2, barium stearate [6865-35-6] 0.4, zinc stearate [557-05-1] 0.5, bis(2,4-di-tert-butylphenyl) phosphite [73640-91-2] 0.3, and tris(2,4-di-tert-butylphenyl) phosphite [31570-04-4] 0.3 part had thermal stability 100 min at 175.degree., compared with 45 min for a similar mixt. contg. no phosphites.

ST PVC heat stabilizer; ABS PVC blend stabilizer; phenol phosphite heat stabilizer; metal soap heat stabilizer

IT Linseed oil  
 Soybean oil  
 RL: USES (Uses)  
 (epoxidized, heat stabilizers, contg. metallic soaps and hindered phenol phosphites, for PVC)

IT Soaps  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, contg. epoxides and hindered phenol phosphites, for PVC)

IT Epoxides  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, contg. metallic soaps and hindered phenol phosphites, for PVC)

IT Heat stabilizers  
 (phosphites, of hindered phenols, contg. epoxides and metallic soaps, for PVC)

IT 9003-56-9  
 RL: USES (Uses)  
 (blends with PVC, heat stabilizers for)

IT 9002-86-2  
 RL: USES (Uses)  
 (heat stabilizers for, metallic soaps and hindered phenol phosphites and epoxides as)

IT 54874-20-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, contg. barium nonylphenolate and epoxides and hindered phenol phosphites, for ABS-PVC blends)

IT 557-05-1  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, contg. barium stearate and epoxides and hindered phenol phosphites, for PVC)

IT 557-04-0  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, contg. calcium stearate and zinc stearate and epoxides and hindered phenol phosphites, for PVC)

IT 73815-31-3 73822-64-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, contg. epoxides and metallic soaps and hindered

phenol phosphites, for PVC)

IT 1592-23-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. magnesium stearate and zinc stearate and epoxides and hindered phenol phosphites, for PVC)

IT 31502-36-0 73726-74-6 73815-34-6 73822-60-3 73822-61-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic soaps and epoxides and hindered phenol mono-hydrogen phosphites, for ABS-PVC blends)

IT 1065-97-0 21177-86-6 25247-39-6 25282-75-1 31570-04-4 70862-09-8  
73726-73-5 73726-75-7 73726-77-9 73740-34-8 73740-35-9  
73815-32-4 73815-33-5 73815-35-7 73815-36-8 73815-37-9  
73815-43-7 **73821-72-4** 73822-57-8 73822-58-9 73822-59-0  
73822-62-5 73822-63-6 73827-74-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic soaps and epoxides and hindered phenol mono-hydrogen phosphites, for PVC)

IT 73640-90-1 73640-91-2 73640-92-3 73726-76-8 73815-38-0  
73820-68-5 73822-51-2 73822-52-3 73822-53-4 73822-54-5  
73822-55-6 73822-56-7  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic soaps and epoxides and hindered phenol phosphites, for PVC)

IT 1675-54-3  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic soaps and hindered phenol phosphites, for PVC)

IT 6865-35-6  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. zinc stearate and epoxides and hindered phenol phosphites, for PVC)

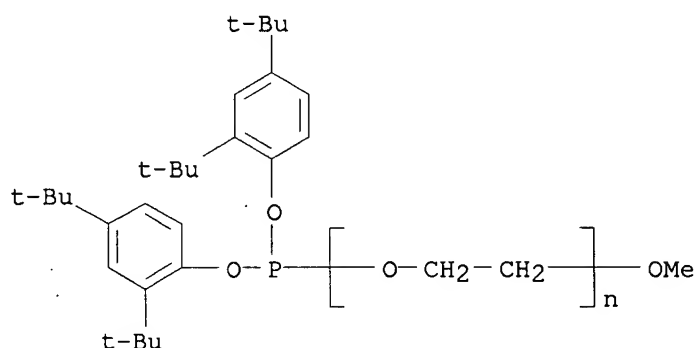
IT 28987-17-9  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. zinc toluate and epoxides and hindered phenol phosphites, for ABS-PVC blends)

IT 55172-98-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. zinc toluate and epoxides and hindered phenol phosphites, for PVC)

IT **73821-72-4**  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic soaps and epoxides and hindered phenol mono-hydrogen phosphites, for PVC)

RN 73821-72-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[bis[2,4-bis(1,1-dimethylethyl)phenoxy]phosphino]-.omega.-methoxy- (9CI) (CA INDEX NAME)



L20 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1980:199316 HCAPLUS

DN 92:199316

TI Halogen-containing resin compositions

IN Minagawa, Motonobu; Nakahara, Yutaka; Yoshikawa, Kazumi

PA Adeka Argus Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08L027-00; C08K005-09; C08K005-52; C08L023-28

CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 55000747	A2	19800107	JP 1978-75041	19780620
	JP 61000378	B4	19860108		
	US 4348308	A	19820907	US 1981-226165	19810119
PRAI	JP 1978-75041		19780620		
	US 1979-50320		19790620		

AB Metallic salts of org. acids, dehydroacetic acid (I) [520-45-6] or its salts, and phosphites of hindered phenols such as tris(2,4-di-tert-butylphenyl) phosphite (II) [31570-04-4] and bis(2,4-di-tert-butylphenyl) cyclohexyl phosphite [25247-39-6] are heat stabilizers for PVC [9002-86-2], optionally contg. ABS polymer [9003-56-9]. Thus, a molding contg. PVC 100, dioctyl phthalate 48, epoxidized soybean oil 2, calcium stearate [1592-23-0] 1, zinc stearate [557-05-1] 0.2, I 0.1, and II 0.5 part had thermal stability 85 min at 190.degree., compared with 30 min for a similar molding without I and II.

ST PVC heat stabilizer; ABS PVC blend stabilizer; butylphenyl phosphite heat stabilizer; fatty acid metal salt stabilizer; epoxide heat stabilizer PVC

IT Linseed oil

Soybean oil

RL: USES (Uses)

(epoxidized, heat stabilizers, contg. metallic salts, dehydroacetic acid and Ph phosphites, for PVC)

IT Oils

RL: USES (Uses)

(fish, epoxidized, heat stabilizers, contg. metallic salts, dehydroacetic acid and Ph phosphites, for PVC)

IT Epoxides

RL: MOA (Modifier or additive use); USES (Uses)

- (heat stabilizers, contg. metallic salts, dehydroacetic acid and Ph phosphites, for PVC)
- IT Heat stabilizers  
(phosphites of hindered phenols, contg. metallic salts, epoxides and dehydroacetic acids, for PVC)
- IT 9003-56-9  
RL: USES (Uses)  
(PVC blends, heat stabilizers for, epoxide-dehydroacetic acid-zinc toluate-barium nonylphenolate-Ph phosphites as)
- IT 9002-86-2  
RL: USES (Uses)  
(heat stabilizers for, dehydroacetic acid, epoxides, fatty acid metal salts and Ph phosphites as)
- IT 557-04-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. epoxides, Ph phosphites, dehydroacetic acid, calcium stearate and zinc stearate, for PVC)
- IT 73726-75-7 73726-76-8 73726-77-9 73740-35-9 **73740-42-8**  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. epoxides, zinc toluate, barium nonylphenolate and dehydroacetic acid, for ABS-PVC blends)
- IT 54874-20-3  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. epoxidized soybean oil, barium nonylphenolate, dehydroacetic acid and Ph phosphites, for ABS-PVC blends)
- IT 557-05-1  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. epoxidized soybean oil, calcium stearate, dehydroacetic acid and Ph phosphites, for PVC)
- IT 1592-23-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. epoxidized soybean oil, zinc stearate, dehydroacetic acid and Ph phosphites, for PVC)
- IT 25247-39-6 31570-04-4 73640-91-2 73726-73-5 73726-74-6  
73740-34-8  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic salts, dehydroacetic acid and epoxides, for PVC)
- IT 520-45-6 4418-26-2 32573-57-2 32574-43-9 57020-07-2 59619-89-5  
66606-21-1 73726-70-2 73726-71-3 73726-72-4  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. metallic salts, epoxides and Ph phosphites, for PVC)
- IT 106-84-3 106-87-6 1675-54-3 2451-62-9 9003-17-2D, epoxidized  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. zinc toluate, barium neodecanoate, dehydroacetic acid and Ph phosphites, for PVC)
- IT 55172-98-0  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. zinc toluate, dehydroacetic acid, epoxides and Ph phosphites, for PVC)
- IT 28987-17-9  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, contg. zinc toluate, epoxides, dehydroacetic acid and Ph phosphites, for ABS-PVC blends)
- IT **73740-42-8**  
RL: MOA (Modifier or additive use); USES (Uses)



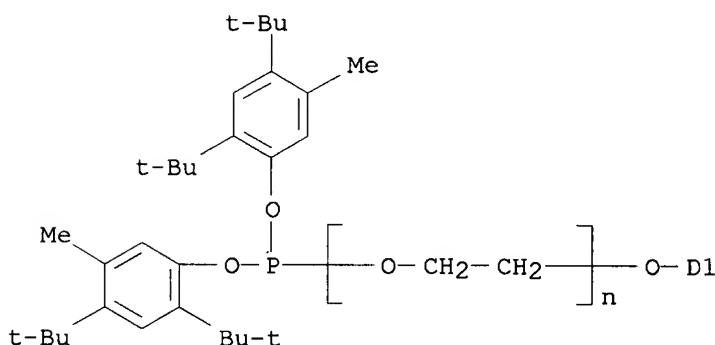
(heat stabilizers, contg. epoxides, zinc toluate, barium nonylphenolate and dehydroacetic acid, for ABS-PVC blends)

RN 73740-42-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[bis[2,4-bis(1,1-dimethylethyl)-5-methylphenoxy]phosphino]-.omega.-(nonylphenoxy)- (9CI) (CA INDEX NAME)



D1-(CH<sub>2</sub>)<sub>8</sub>-Me



L20 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1979:508716 HCAPLUS

DN 91:108716

TI Linear polyesters or copolyesters

IN Schwetlick, Klaus; Rueger, Claus; Noack, Rainer; Hannes, Wilfrid; Thiele, Ulrich; Kuehnpast, Wolfgang; Franke, Marianne; Peuker, Isolde

PA Ger. Dem. Rep.

SO Ger. (East), 11 pp.

CODEN: GEXXA8

DT Patent

LA German

IC C08K005-52; C08G063-16

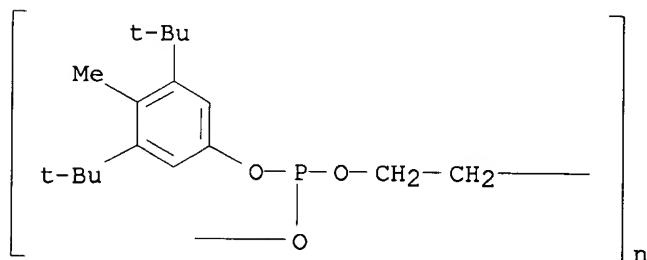
CC 36-6 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 135209	Z	19790418	DD 1977-202392	19771205
PRAI	DD 1977-202392		19771205		

AB Phosphite (poly)esters are heat stabilizers for polyester films, fibers, and moldings, and for reprocessing of polyester waste. Thus, heating di-Me terephthalate 1000, HOCH<sub>2</sub>CH<sub>2</sub>OH 700, and Mn(OAc)<sub>2</sub> 0.4 g at 160-220.degree., adding 0.3 g Sb<sub>2</sub>O<sub>3</sub> and 0.5 g pyrocatechol cyclic 2,6-di-tert-butyl-4-methylphenyl phosphite (I) [1100-34-1], and heating 3 h at 286.degree. gives polyester [25038-59-9] with relative viscosity (1:1 PhOH-C<sub>2</sub>H<sub>2</sub>Cl<sub>4</sub>, 20.degree.) 1.394, CO<sub>2</sub>H content 24.0 .mu.equiv./g, m.p. 261.degree., and no oxidn. exotherm in DTA, compared with 1.401, 28.4,

260.degree., and exotherm at 239.degree., resp., with a similar polymer  
 prepd. in presence of 1.0 g (PhO)3PO in place of I.  
 ST heat stabilizer polyester; polyethylene terephthalate heat stabilizer;  
 phosphite ester heat stabilizer; pyrocatechol phosphite heat stabilizer;  
 BHT phosphite heat stabilizer  
 IT Heat stabilizers  
 (phosphite esters, for poly(ethylene terephthalate))  
 IT 25038-59-9, uses and miscellaneous  
 RL: USES (Uses)  
 (heat stabilizers for, phosphite esters as)  
 IT 1100-34-1 71263-79-1 **71263-81-5** 71264-06-7  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, for poly(ethylene terephthalate))  
 IT **71263-81-5**  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (heat stabilizers, for poly(ethylene terephthalate))  
 RN 71263-81-5 HCAPLUS  
 CN Poly[oxy[[3,5-bis(1,1-dimethylethyl)-4-methylphenoxy]phosphinidene]oxy-1,2-  
 ethanediyl] (9CI) (CA INDEX NAME)



L20 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2003 ACS  
 AN 1978:511307 HCAPLUS  
 DN 89:111307  
 TI Phenol derivative oligoesters as heat stabilizers  
 PA Societe Anon. Argus Chemical N. V., Belg.  
 SO Belg., 30 pp.  
 CODEN: BEXXAL  
 DT Patent  
 LA French  
 IC C08G  
 CC 36-6 (Plastics Manufacture and Processing)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 854443	A1	19771110	BE 1977-177424	19770510
PRAI	BE 1977-177424		19770510		

AB (PhO)3P, (PhO)3PO, tri-Ph borate, (PhO)2POH, or a similar compd. was  
 condensed with (PhO)2CO and with .gtoreq.1 compd. contg. 2-3 hydroxyphenyl  
 groups, such as 4,4'-butylidenebis(2-tert-butyl-5-methylphenol) (I),  
 bisphenol A, hydroquinone, or 1,1,3-tris(5-tert-butyl-4-hydroxy-2-  
 methylphenyl)butane, to prep. oligoesters (mol. wt. 700-10000) which were  
 useful as heat stabilizers for polyolefins, PVC [9002-86-2], polyamides,  
 etc. Thus, (PhO)3P 31, I 191, (PhO)2CO 64.2, and K2CO3 0.3 g were heated  
 at 160.degree. with removal of 65.2 g phenol to prep. a condensate (mol.  
 wt. 1860) which was mixed (0.2%) with polypropylene [9003-07-0] contg.

0.2% dilauryl thiodipropionate. The mixt. was stable for 1300 h at 160.degree. in air.

ST heat stabilizer phenol oligoester; phenol deriv oligoester stabilizer; phosphite phenol heat stabilizer; borate phenol heat stabilizer; phosphate phenol heat stabilizer; polyolefin heat stabilizer; polyamide heat stabilizer; ester phenol heat stabilizer

IT Esters, uses and miscellaneous  
RL: MOA (Modifier or additive use); USES (Uses)  
(heat stabilizers, for plastics)

IT Polycarbonates  
Polyesters, uses and miscellaneous  
RL: USES (Uses)  
(oligomers, heat stabilizers, for plastics)

IT Heat stabilizers  
(phenol deriv. oligoesters, for plastics)

IT 9002-86-2 9002-88-4 9003-07-0 9003-28-5 9003-56-9 24937-78-8  
32131-17-2, uses and miscellaneous  
RL: USES (Uses)  
(heat stabilizers for, phenol deriv. oligoesters as)

IT 66806-99-3 **66807-00-9** 66807-02-1 66807-03-2 66807-04-3  
66807-05-4 66807-06-5 66807-07-6 66807-08-7 66807-09-8  
66807-10-1 66807-11-2 66807-12-3 66807-13-4 66807-14-5  
66807-19-0 66807-20-3 66807-21-4 66807-22-5 66807-23-6  
66807-24-7 66807-25-8 66807-26-9  
RL: USES (Uses)  
(oligomeric, heat stabilizers, for plastics)

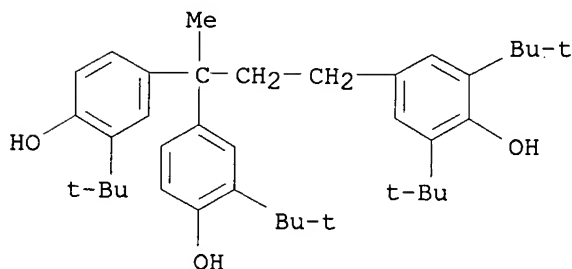
IT **66807-00-9**  
RL: USES (Uses)  
(oligomeric, heat stabilizers, for plastics)

RN 66807-00-9 HCAPLUS

CN Carbonic acid, diphenyl ester, polymer with 4-[3,3-bis[3-(1,1-dimethylethyl)-4-hydroxyphenyl]butyl]-2,6-bis(1,1-dimethylethyl)phenol, 4,4'-cyclohexylidenebis[phenol] and 2-ethylhexyl diphenyl phosphite (9CI)  
(CA INDEX NAME)

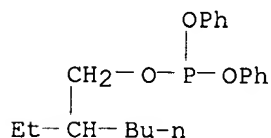
CM 1

CRN 61527-14-8  
CMF C38 H54 O3



CM 2

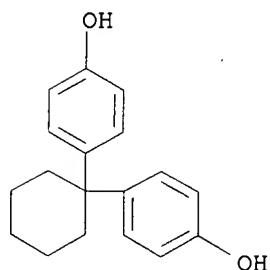
CRN 15647-08-2  
CMF C20 H27 O3 P



CM 3

CRN 843-55-0

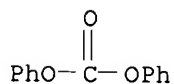
CMF C18 H20 O2



CM 4

CRN 102-09-0

CMF C13 H10 O3



L20 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2003 ACS

AN 1975:99078 HCAPLUS

DN 82:99078

TI Linear phosphorus-containing polymer by treating oxyhalophosphorus compound with aromatic diols in the presence of a catalyst

IN Masai, Takahito; Kato, Yasuo; Fukui, Nobuhiko

PA Toyobo Co., Ltd.

SO Jpn. Tokkyo Koho, 5 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

IC C08G; C08K

CC 36-2 (Plastics Manufacture and Processing)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 49005640	B4	19740208	JP 1970-63062	19700717

PRAI JP 1970-63062

19700717

AB The title polymers with high mol. wt. and low discoloration were prepd. and they were useful as fire retardants for plastics. For example, bisphenol A 52.2, o-chlorophenyl dichlorophosphate 24.6, di-Et 3,5-di-tert-butyl-4-hydroxybenzylphosphonate (I) 1, and CaCl<sub>2</sub> 0.15 part were heated under N at 150.degree. for 1.5, at 170.degree. for 1.5 hr and at 200.degree. for 16 hr and then at 200.degree. for 1 hr, at 220.degree. for 1 hr, and at 250.degree. for 1.5 hr in vacuo to give light yellowish brown polymer [54473-15-3] with mol. wt. 3900, compared with 2370 for polymer without I.

ST polyester phosphorus contg; fire retardant org polyphosphate

IT Fireproofing

(agents, phosphorus-contg. polyesters, for plastics)

IT Polyesters, preparation

RL: PREP (Preparation)

(phosphorus-contg.)

IT 54473-15-3P

RL: PREP (Preparation)

(fire retardants, manuf. of)

IT 54473-15-3P

RL: PREP (Preparation)

(fire retardants, manuf. of)

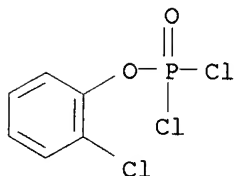
RN 54473-15-3 HCAPLUS

CN Phosphonic acid, [[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]-, diethyl ester, polymer with 2-chlorophenyl phosphorodichloridate and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 15074-54-1

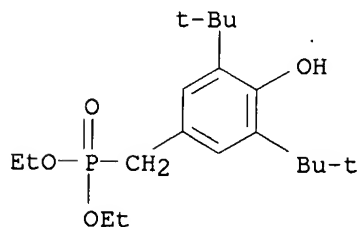
CMF C6 H4 Cl3 O2 P



CM 2

CRN 976-56-7

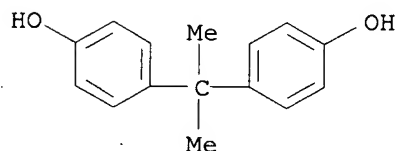
CMF C19 H33 O4 P



CM 3

CRN 80-05-7

CMF C15 H16 O2



=&gt; D QUE

L6 STR

G1~P~O  
1 2 3*searched non-polym*

VAR G1=X/O

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L7 STR

t-Bu~Cb~O  
1 2 3

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

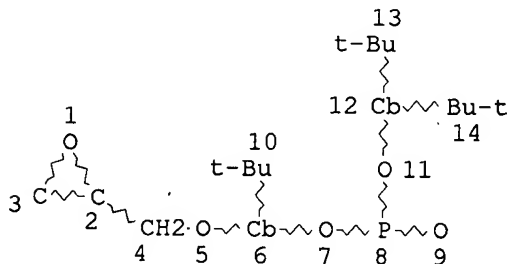
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L25 3842 SEA FILE=REGISTRY SSS FUL L6 AND L7

L27 STR

*zero answers found*

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L29           0 SEA FILE=REGISTRY SUB=L25 SSS FUL L27

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